

**PJM Generator Interconnection
W4-037 Bismark 500 kV
0 MW Capacity / 32 MW Energy
Feasibility Study Report**

*April 2011
DMS #643167*

Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, §36.2, as well as the Feasibility Study Agreement between Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Virginia Electric and Power Company.

Preface

The intent of this Feasibility Study is to determine a plan, with preliminary cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by IC. As a requirement for interconnection, IC may be responsible for the cost of constructing Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM and the underlying system. All facilities required for interconnection of a generation interconnection project must be designed to meet ITO technical specifications.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. IC is responsible for its right of way, real estate, and construction permit issues.

General

Queue W4-037 is an IC 32 MW energy modification to prior queue request T157. W4-047 replaces 32 MW energy originally proposed to be generated by wind turbines and replaces that energy portion with battery power. The facility is proposed to be located south of the town of New Creek, in Grant County, West Virginia on the ITO 500 kV line on ITO facilities. The requested in-service date is December 2012. Project W3-047 was evaluated for compliance with reliability criteria for summer peak conditions in 2014.

Network Impacts:

Generator Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

No problems identified.

Multiple Facility Contingency

(Double Circuit Tower Line Contingencies only with full energy output. Stuck Breaker and Bus Fault contingencies will be applied during the Impact Study)

No problems identified.

Contribution to Previously Identified Overloads

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have % allocation of cost responsibility which will be calculated and reported for the Impact Study.)

No problems identified.

Contribution to Previously Identified System Reinforcements

(Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study)

None.

Short Circuit

(Report Overdutied breakers here)

No problems identified.

ITO Analyses

There are no additional upgrades required beyond those previously identified.